- 1 -

SEQUENCE LISTING

(1)	GENERAL	INFORMATION:

- (i) APPLICANT: KAWAKAMI, YUTAKA; ROSENBERG, STEVEN A.
- (ii) TITLE OF INVENTION: MELANOMA ANTIGENS AND THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS
- (iii) NUMBER OF SEQUENCES: 126
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: MORGAN & FINNEGAN, L.L.P.
 - (B) STREET: 345 PARK AVENUE
 - (C) CITY: NEW YORK
 - (D) STATE: NEW YORK
 - (E) COUNTRY: USA
 - (F) ZIP: 10154
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: FLOPPY DISK
 - (B) COMPUTER: IBM PC COMPATIBLE
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: ASCII
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: US/08/417,174
 - (B) FILING DATE: 05-APR-1995
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US/08/231,565
 - (B) FILING DATE: 22-APR-1994
 - (C) CLASSIFICATION:
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: CAROL M. GRUPPI
 - (B) REGISTRATION NUMBER: 37,341
 - (C) REFERENCE/DOCKET NUMBER: 2026-4124US1
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: (212) 758-4800
 - (B) TELEFAX: (212) 751-6849
 - (C) TELEX: 421792
- (2) INFORMATION FOR SEQ ID NO: 1:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 1559
 - (B) TYPE: NUCLEOTIDE
 - (C) STRANDEDNESS: DOUBLE
 - (D) TOPOLOGY: UNKNOWN

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

AGCAGACAGA	GGACTCTCAT	TAAGGAAGGT	GTCCTGTGCC	40
CTGACCCTAC	AAGATGCCAA	GAGAAGATGC	TCACTTCATC	80
TATGGTTACC	CCAAGAAGGG	GCACGGCCAC	TCTTACACCA	120
CGGCTGAAGA	GGCCGCTGGG	ATCGGCATCC	TGACAGTGAT	160
CCTGGGAGTC	TTACTGCTCA	TCGGCTGTTG	GTATTGTAGA	200
AGACGAAATG	GATACAGAGC	CTTGATGGAT	AAAAGTCTTC	240
ATGTTGGCAC	TCAATGTGCC	TTAACAAGAA	GATGCCCACA	280
AGAAGGGTTT	GATCATCGGG	ACAGCAAAGT	GTCTCTTCAA	320
GAGAAAAACT	GTGAACCTGT	GGTTCCCAAT	GCTCCACCTG	360
CTTATGAGAA	ACTCTCTGCA	GAACAGTCAC	CACCACCTTA	400
TTCACCTTAA	GAGCCAGCGA	GACACCTGAG	ACATGCTGAA	440
ATTATTTCTC	TCACACTTTT	GCTTGAATTT	AATACAGACA	480
TCTAATGTTC	TCCTTTGGAA	TGGTGTAGGA	AAAATGCAAG	520
CCATCTCTAA	TAATAAGTCA	GTGTTAAAAT	TTTAGTAGGT	560
CCGCTAGCAG	TACTAATCAT	GTGAGGAAAT	GATGAGAAAT	600
ATTAAATTGG	GAAAACTCCA	TCAATAAATG	TTGCAATGCA	640
TGATACTATC	TGTGCCAGAG	GTAATGTTAG	TAAATCCATG	680
GTGTTATTTT	CTGAGAGACA	GAATTCAAGT	GGGTATTCTG	720
GGGCCATCCA	ATTTCTCTTT	ACTTGAAATT	TGGCTAATAA	760
CAAACTAGTC	AGGTTTTCGA	ACCTTGACCG	ACATGAACTG	800
TACACAGAAT	TGTTCCAGTA	CTATGGAGTG	CTCACAAAGG	840
ATACTTTTAC	AGGTTAAGAC	AAAGGGTTGA	CTGGCCTATT	880
TATCTGATCA	AGAACATGTC	AGCAATGTCT	CTTTGTGCTC	920
TAAAATTCTA	TTATACTACA	ATAATATATT	GTAAAGATCC	960
TATAGCTCTT	TTTTTTTGAG	ATGGAGTTTC	GCTTTTGTTG	1000

CCCAGGCTGG	AGTGCAATGG	CGCGATCTTG	GCTCACCATA	1040
ACCTCCGCCT	CCCAGGTTCA	AGCAATTCTC	CTGCCTTAGC	1080
CTCCTGAGTA	GCTGGGATTA	CAGGCGTGCG	CCACTATGCC	1120
TGACTAATTT	TGTAGTTTTA	GTAGAGACGG	GGTTTCTCCA	1160
TGTTGGTCAG	GCTGGTCTCA	AACTCCTGAC	CTCAGGTGAT	1200
CTGCCCGCCT.	CAGCCTCCCA	AAGTGCTGGA	ATTACAGGCG	1240
TGAGCCACCA	CGCCTGGCTG	GATCCTATAT	CTTAGGTAAG	1280
ACATATAACG	CAGTCTAATT	ACATTTCACT	TCAAGGCTCA	1320
ATGCTATTCT	AACTAATGAC	AAGTATTTTC	TACTAAACCA	1360
GAAATTGGTA	GAAGGATTTA	AATAAGTAAA	AGCTACTATG	1400
TACTGCCTTA	GTGCTGATGC	CTGTGTACTG	CCTTAAATGT	1440
ACCTATGGCA	ATTTAGCTCT	CTTGGGTTCC	CAAATCCCTC	1480
rcacaagaat	GTGCAGAAGA	AATCATAAAG	GATCAGAGAT	1520
rctgaaaaa	ААААААААА	АААААААА	AAAAAAA	1559

(2) INFORMATION FOR SEQ ID NO: 2:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 118
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Met Pro Arg Glu Asp Ala His Phe Ile Tyr Gly Tyr Pro Lys Lys Gly His Gly His Ser Tyr Thr Thr Ala Glu Glu Ala Ala 20 Gly Ile Gly Ile Leu Thr Val Ile Leu Gly Val Leu Leu 30 35 Ile Gly Cys Trp Tyr Cys Arg Arg Arg Asn Gly Tyr Arg Ala 45 50 55 Leu Met Asp Lys Ser Leu His Val Gly Thr Gln Cys Ala Leu 60 65 Thr Arg Arg Cys Pro Gln Glu Gly Phe Asp His Arg Asp Ser 75 80

Lys Val Ser Leu Gln Glu Lys Asn Cys Glu Pro Val Val Pro
85 90 95

Asn Ala Pro Pro Ala Tyr Glu Lys Leu Ser Ala Glu Gln Ser
100 105 110

Pro Pro Pro Tyr Ser Pro
115

- (2) INFORMATION FOR SEQ ID NO: 3:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

Thr Thr Ala Glu Glu Ala Ala Gly Ile
1 5

- (2) INFORMATION FOR SEQ ID NO: 4:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

Ala Ala Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 5:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

Gly Ile Gly Ile Leu Thr Val Ile Leu
1 5

- (2) INFORMATION FOR SEQ ID NO: 6:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEO ID NO: 6:

Gly Ile Leu Thr Val Ile Leu Gly Val

- (2) INFORMATION FOR SEQ ID NO: 7:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

Ile Leu Thr Val Ile Leu Gly Val Leu
1 5

- (2) INFORMATION FOR SEQ ID NO: 8:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

Leu Thr Val Ile Leu Gly Val Leu Leu
1 5

- (2) INFORMATION FOR SEQ ID NO: 9:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

Thr Val Ile Leu Gly Val Leu Leu Leu
1 5

- (2) INFORMATION FOR SEQ ID NO: 10:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

Val Ile Leu Gly Val Leu Leu Leu Ile 1 5

- (2) INFORMATION FOR SEQ ID NO: 11:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH:
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

Ala Leu Met Asp Lys Ser Leu His Val

- (2) INFORMATION FOR SEQ ID NO: 12:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

Ser Leu His Val Gly Thr Gln Cys Ala

- (2) INFORMATION FOR SEQ ID NO: 13:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

Pro Val Val Pro Asn Ala Pro Pro Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 14:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Asn Ala Pro Pro Ala Tyr Glu Lys Leu 1 5

- (2) INFORMATION FOR SEQ ID NO: 15:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown

- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

Tyr Thr Thr Ala Glu Glu Ala Ala Gly Ile
1 5 10

- (2) INFORMATION FOR SEQ ID NO: 16:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

Thr Ala Glu Glu Ala Ala Gly Ile Gly Ile 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 17:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

Glu Ala Ala Gly Ile Gly Ile Leu Thr Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 18:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

Ala Ala Gly Ile Gly Ile Leu Thr Val Ile 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 19:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

Gly Ile Leu Thr Val Ile Leu Gly Val Leu
1 5 10

- (2) INFORMATION FOR SEQ ID NO: 20:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

Ile Leu Thr Val Ile Leu Gly Val Leu Leu
1 5 10

- (2) INFORMATION FOR SEQ ID NO: 21:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

Leu Thr Val Ile Leu Gly Val Leu Leu Leu 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 22:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

Thr Val Ile Leu Gly Val Leu Leu Leu Ile 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 23:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

Arg Ala Leu Met Asp Lys Ser Leu His Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 24:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Ser Leu His Val Gly Thr Gln Cys Ala Leu 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 25:
 - (i) SEQUENCE CHARACTERISTICS:

(A)	LENGTH:	10
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- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

Ser Leu Gln Glu Lys Asn Cys Glu Pro Val 1 5 10

(2) INFORMATION FOR SEQ ID NO: 26:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 2172
 - (B) TYPE: nucleotide
 - (C) STRANDEDNESS: Double
 - (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: cDNA
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

	GTCGACGGCC	ATTACCAATC	GCGACCGGGA	AGAACACAAT	40
	GGATCTGGTG	CTAAAAAGAT	GCCTTCTTCA	TTTGGCTGTG	80
	ATAGGTGCTT	TGCTGGCTGT	GGGGGCTACA	AAAGTACCCA	120
	GAAACCAGGA	CTGGCTTGGT	GTCTCAAGGC	AACTCAGAAC	160
	CAAAGCCTGG	AACAGGCAGC	TGTATCCAGA	GTGGACAGAA	200
	GCCCAGAGAC	TTGACTGCTG	GAGAGGTGGT	CAAGTGTCCC	240
	TCAAGGTCAG	TAATGATGGG	CCTACACTGA	TTGGTGCAAA	280
	TGCCTCCTTC	TCTATTGCCT	TGAACTTCCC	TGGAAGCCAA	320
	AAGGTATTGC	CAGATGGGCA	GGTTATCTGG	GTCAACAATA	360
	CCATCATCAA	TGGGAGCCAG	GTGTGGGGAG	GACAGCCAGT	400
	GTATCCCCAG	GAAACTGACG	ATGCCTGCAT	CTTCCCTGAT	440
	GGTGGACCTT	GCCCATCTGG	CTCTTGGTCT	CAGAAGAGAA	480
+	GCTTTGTTTA	TGTCTGGAAG	ACCTGGGGCC	AATACTGGCA	520
	ATTTCTAGGG	GGCCCAGTGT	CTGGGCTGAG	CATTGGGACA	560

				•
GGCAGGGCAA	TGCTGGGCAC	ACACACCATG	GAAGTGACTG	600
TCTACCATCG	CCGGGGATCC	CGGAGCTATG	TGCCTCTTGC	640
TCATTCCAGC	TCAGCCTTCA	CCATTACTGA	CCAGGTGCCT	680
TTCTCCGTGA	GCGTGTCCCA	GTTGCGGGCC	TTGGATGGAG	720
GGAACAAGCA	CTTCCTGAGA	AATCAGCCTC	TGACCTTTGC	760
CCTCCAGCTC	CATGACCCCA	GTGGCTATCT	GGCTGAAGCT	800
GACCTCTCCT	ACACCTGGGA	CTTTGGAGAC	AGTAGTGGAA	840
CCCTGATCTC	TCGGGCACTT	GTGGTCACTC	ATACTTACCT	880
GGAGCCTGGC	CCAGTCACTG	CCCAGGTGGT	CCTGCAGGCT	920
GCCATTCCTC	TCACCTCCTG	TGGCTCCTCC	CCAGTTCCAG	960
GCACCACAGA	TGGGCACAGG	CCAACTGCAG	AGGCCCCTAA	1000
CACCACAGCT	GGCCAAGTGC	CTACTACAGA	AGTTGTGGGT	1040
ACTACACCTG	GTCAGGCGCC	AACTGCAGAG	CCCTCTGGAA	1080
CCACATCTGT	GCAGGTGCCA	ACCACTGAAG	TCATAAGCAC	1120
TGCACCTGTG	CAGATGCCAA	CTGCAGAGAG	CACAGGTATG	1160
ACACCTGAGA	AGGTGCCAGT	TTCAGAGGTC	ATGGGTACCA	1200
CACTGGCAGA	GATGTCAACT	CCAGAGGCTA	CAGGTATGAC	1240
ACCTGCAGAG	GTATCAATTG	TGGTGCTTTC	TGGAACCACA	1280
GCTGCACAGG	TAACAACTAC	AGAGTGGGTG	GAGACCACAG	1320
CTAGAGAGCT	ACCTATCCCT	GAGCCTGAAG	GTCCAGATGC	1360
CAGCTCAATC	ATGTCTACGG	AAAGTATTAC	AGGTTCCCTG	1400
GGCCCCCTGC	TGGATGGTAC	AGCCACCTTA	AGGCTGGTGA	1440
AGAGACAAGT	CCCCTGGAT	TGTGTTCTGT	ATCGATATGG	1480
TTCCTTTTCC	GTCACCCTGG	ACATTGTCCA	GGGTATTGAA	1520
AGTGCCGAGA	TCCTGCAGGC	TGTGCCGTCC	GGTGAGGGGG	1560
ATGCATTTGA	GCTGACTGTG	TCCTGCCAAG	GCGGGCTGCC	1600
CAAGGAAGCC	TGCATGGAGA	TCTCATCGCC	AGGGTGCCAG	1640

CCCCCTGCCC	AGCGGCTGTG	CCAGCCTGTG	CTACCCAGCC	1680
CAGCCTGCCA	GCTGGTTCTG	CACCAGATAC	TGAAGGGTGG	1720
CTCGGGGACA	TACTGCCTCA	ATGTGTCTCT	GGCTGATACC	1760
AACAGCCTGG	CAGTGGTCAG	CACCCAGCTT	ATCATGCCTG	1800
GTCAAGAAGC	AGGCCTTGGG	CAGGTTCCGC	TGATCGTGGG	1840
CATCTTGCTG	GTGTTGATGG	CTGTGGTCCT	TGCATCTCTG	1880
ATATATAGGC	GCAGACTTAT	GAAGCAAGAC	TTCTCCGTAC	1920
CCCAGTTGCC	ACATAGCAGC	AGTCACTGGC	TGCGTCTACC	1960
CCGCATCTTC	TGCTCTTGTC	CCATTGGTGA	GAACAGCCCC	2000
CTCCTCAGTG	GGCAGCAGGT	CTGAGTACTC	TCATATGATG	2040
CTGTGATTTT	CCTGGAGTTG	ACAGAAACAC	CTATATTTCC	2080
CCAGTCTTC	CCTGGGAGAC	TACTATTAAC	TGAAATAAAT	2120
ACTCAGAGCC	TGAAAAAAA	AAAAAAAT	AAAAAAAA	2160
AAAAAAAA	AA			2172

(2) INFORMATION FOR SEQ ID NO: 27:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 661
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

 Met
 Asp
 Leu
 Val
 Leu
 Lys
 Arg
 Cys
 Leu
 Leu
 His
 Leu

 Ala
 Val
 Ile
 Gly
 Ala
 Leu
 Leu
 Ala
 Val
 Gly
 Ala
 Thr

 Lys
 Val
 Pro
 Arg
 Asn
 Gln
 Asp
 Trp
 Leu
 Gly
 Val
 Ser

 Arg
 Gln
 Leu
 Ala
 Trp
 Asn
 Arg
 Gln
 Leu

 Tyr
 Pro
 Glu
 Trp
 Thr
 Glu
 Ala
 Gln
 Arg
 Leu
 Asp
 Cys

 50
 55
 60
 60
 60
 Trp
 Arg
 Gly
 Gln
 Val
 Ser
 Leu
 Lys
 Val
 Ser
 Asn

Asp Gly Pro Thr Leu Ile Gly Ala Asn Ala Ser Phe Ser Ile Ala Leu Asn Phe Pro Gly Ser Gln Lys Val Leu Pro Asp Gly Gln Val Ile Trp Val Asn Asn Thr 100 105 Ile Ile Asn Gly Ser Gln Val Trp Gly Gly Gln Pro 115 Val Tyr Pro Gln Glu Thr Asp Asp Ala Cys Ile Phe Pro Asp Gly Gly Pro Cys Pro Ser Gly Ser Trp Ser 140 Gln Lys Arg Ser Phe Val Tyr Val Trp Lys Thr Trp 150 Gly Gln Tyr Trp Gln Phe Leu Gly Gly Pro Val Ser 160 165 Gly Leu Ser Ile Gly Thr Gly Arg Ala Met Leu Gly 175 170 Thr His Thr Met Glu Val Thr Val Tyr His Arg Arg 185 Gly Ser Arg Ser Tyr Val Pro Leu Ala His Ser Ser 195 200 Ser Ala Phe Thr Ile Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Arg Ala Leu Asp Gly Gly Asn Lys His Phe Leu Arg Asn Gln Pro Leu Thr Phe 230 Ala Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala 245 Glu Ala Asp Leu Ser Tyr Thr Trp Asp Phe Gly Asp 260 255 Ser Ser Gly Thr Leu Ile Ser Arg Ala Leu Val Val 265 Thr His Thr Tyr Leu Glu Pro Gly Pro Val Thr Ala 275 280 Gln Val Val Leu Gln Ala Ala Ile Pro Leu Thr Ser 290 Cys Gly Ser Ser Pro Val Pro Gly Thr Thr Asp Gly 300 His Arg Pro Thr Ala Glu Ala Pro Asn Thr Thr Ala 310 315 Gly Gln Val Pro Thr Thr Glu Val Val Gly Thr Thr 325 Pro Gly Gln Ala Pro Thr Ala Glu Pro Ser Gly Thr 335 340 Thr Ser Val Gln Val Pro Thr Thr Glu Val Ile Ser 345 350 Thr Ala Pro Val Gln Met Pro Thr Ala Glu Ser Thr Gly Met Thr Pro Glu Lys Val Pro Val Ser Glu Val 370 375 Met Gly Thr Thr Leu Ala Glu Met Ser Thr Pro Glu 380 385 390

Ala Thr Gly Met Thr Pro Ala Glu Val Ser Ile Val 395 400 Val Leu Ser Gly Thr Thr Ala Ala Gln Val Thr Thr 410 Thr Glu Trp Val Glu Thr Thr Ala Arg Glu Leu Pro 420 Ile Pro Glu Pro Glu Gly Pro Asp Ala Ser Ser Ile 430 435 Met Ser Thr Glu Ser Ile Thr Gly Ser Leu Gly Pro 445 Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu Val Lys 455 460 Arg Gln Val Pro Leu Asp Cys Val Leu Tyr Arg Tyr 470 475 Gly Ser Phe Ser Val Thr Leu Asp Ile Val Gln Gly 480 490 Ile Glu Ser Ala Glu Ile Leu Gln Ala Val Pro Ser 495 500 Gly Glu Gly Asp Ala Phe Glu Leu Thr Val Ser Cys 510 Gln Gly Gly Leu Pro Lys Glu Ala Cys Met Glu Ile 520 Ser Ser Pro Gly Cys Gln Pro Pro Ala Gln Arg Leu 530 535 Cys Gln Pro Val Leu Pro Ser Pro Ala Cys Gln Leu 545 Val Leu His Gln Ile Leu Lys Gly Gly Ser Gly Thr 560 555 Tyr Cys Leu Asn Val Ser Leu Ala Asp Thr Asn Ser 570 Leu Ala Val Val Ser Thr Gln Leu Ile Met Pro Gly 580 585 Gln Glu Ala Gly Leu Gly Gln Val Pro Leu Ile Val 595 Gly Ile Leu Leu Val Leu Met Ala Val Val Leu Ala 605 Ser Leu Ile Tyr Arg Arg Arg Leu Met Lys Gln Asp 620 615 Phe Ser Val Pro Gln Leu Pro His Ser Ser Ser His 630 Trp Leu Arg Leu Pro Arg Ile Phe Cys Ser Cys Pro 640 645 Ile Gly Glu Asn Ser Pro Leu Leu Ser Gly Gln Gln 650 Val

(2) INFORMATION FOR SEQ ID NO: 28:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown

- (ii) MOLECULE TYPE: Protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Val Pro Gly Ile Leu Leu Thr

- (2) INFORMATION FOR SEQ ID NO: 29:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

Leu Leu Ser Gly Gln Gln Val

- (2) INFORMATION FOR SEQ ID NO: 30:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 12
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Protein
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Pro Pro Gln Trp Ala Ala Gly Leu Ser Thr Leu Ile 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 31:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

Met Leu Leu Ala Val Leu Tyr Cys Leu 1 5

- (2) INFORMATION FOR SEQ ID NO: 32:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

Tyr Met Asn Gly Thr Met Ser Gln Val

- (2) INFORMATION FOR SEQ ID NO: 33:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 34:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Val Leu Tyr Arg Tyr Gly Ser Phe Ser Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 35:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

Ala Leu Asp Gly Gly Asn Lys His Phe Leu 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 36:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

Val Leu Lys Arg Cys Leu Leu His Leu . 5

- (2) INFORMATION FOR SEQ ID NO: 37:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

Val Leu Pro Ser Pro Ala Cys Gln Leu Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 38:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Ser Leu Ala Asp Thr Asn Ser Leu Ala Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 39:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

Ser Val Ser Val Ser Gln Leu Arg Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 40:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Tyr Leu Glu Pro Gly Pro Val Thr Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 41:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown

		(D) TOPOLOGY: Unknown	
	(ii)	MOLECULE TYPE: Peptide	-
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO: 41:	
Leu 1	Asn Val	Ser Leu Ala Asp Thr Asn 5	
(2)	INFORM	ATION FOR SEQ ID NO: 42:	
	(i)	SEQUENCE CHARACTERISTICS: (A) LENGTH: 58 (B) TYPE: NUCLEOTIDE (C) STRANDEDNESS: DOUBLE (D) TOPOLOGY: UNKNOWN	
	(ii)	MOLECULE TYPE: cDNA	
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO: 42:	
GGAC	AGGCCG Z	AGGCGGCCTT TTTTTTTTT TTTTTTTTT	4 (
	TTTTTT 1	•	58
			٥,
(2)	INFORMA	ATION FOR SEQ ID NO: 43:	
ſ	(i)	SEQUENCE CHARACTERISTICS: (A) LENGTH: 12 (B) TYPE: NUCLEOTIDE (C) STRANDEDNESS: DOUBLE (D) TOPOLOGY: UNKNOWN	
	(ii)	MOLECULE TYPE: cDNA	
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO: 43:	
CCAA'	TCGCGA C	:C	12
(2)	INFORMA	TION FOR SEQ ID NO: 44:	
	(i)	SEQUENCE CHARACTERISTICS: (A) LENGTH: 15 (B) TYPE: NUCLEOTIDE (C) STRANDEDNESS: DOUBLE (D) TOPOLOGY: UNKNOWN	
	(ii)	MOLECULE TYPE: cDNA	

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:
GGTCGCGATT GGTAA
(2) INFORMATION FOR SEQ ID NO: 45:
(i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 9 (B) TYPE: amino acid (C) STRANDEDNESS: Unknown (D) TOPOLOGY: Unknown
(ii) MOLECULE TYPE: Peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:
Gly Ile Leu Gly Phe Val Phe Thr Leu 1 5
(2) INFORMATION FOR SEQ ID NO: 46:
(i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 9 (B) TYPE: amino acid (C) STRANDEDNESS: Unknown (D) TOPOLOGY: Unknown
(ii) MOLECULE TYPE: Peptide
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:
Lys Thr Trp Gly Gln Tyr Trp Gln Val
(2) INFORMATION FOR SEQ ID NO: 47:
(i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 10 (B) TYPE: amino acid (C) STRANDEDNESS: Unknown (D) TOPOLOGY: Unknown
(ii) MOLECIHE TYPE: Pentide

SEQUENCE DESCRIPTION:

(xi)

SEQ ID NO: 47:

15

Lys Thr Trp Gly Gln Tyr Trp Gln Val Leu
1 5 10

- (2) INFORMATION FOR SEQ ID NO: 48:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

Ile Thr Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 49:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

Thr Ile Thr Asp Gln Val Pro Phe Ser Val 1 5 10

- (2) INFORMATION FOR SEQ ID NO: 50:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

Ala Leu Gly Ile Gly Ile Leu Thr Val



- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

Ala Met Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 52:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

Ala Ile Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 53:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH:
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

Trp Ala Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 54:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

Phe Ala Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 55:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

Tyr Ala Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 56:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH:
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Ala Ala Trp Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 57:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown

- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

Ala Ala Phe Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 58:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Ala Ala Tyr Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 59:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

Lys Leu Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 60:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

Lys Met Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 61:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

Lys Ile Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 62:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

Trp Leu Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 63:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

Phe Leu Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 64:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

Tyr Leu Gly Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 65:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

Ala Leu Trp Ile Gly Ile Leu Thr Val
1 5

- (2) INFORMATION FOR SEQ ID NO: 66:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

Ala Leu Phe Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 67:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

Ala Leu Tyr Ile Gly Ile Leu Thr Val

- (2) INFORMATION FOR SEQ ID NO: 68:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

Lys Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 69:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

Lys Met Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 70:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Lys Ile Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 71:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

Trp Thr Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 72:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

Phe Thr Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 73:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown

- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

Tyr Thr Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 74:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

Ala Thr Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 75:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

Leu Thr Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 76:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

Lys Thr Tyr Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 77:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

Lys Thr Phe Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 78:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

Ala Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 79:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

Leu Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 80:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

Trp Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 81:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

Phe Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 82:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

Tyr Leu Trp Gly Gln Tyr Trp Gln Val

- (2) INFORMATION FOR SEQ ID NO: 83:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

Ile Leu Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 84:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Ile Met Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 85:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

Ile Ile Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 86:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: TYPE: amino acid (B)
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Phe Thr Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 87:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH:
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - TOPOLOGY: Unknown
 - MOLECULE TYPE: Peptide (ii)
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Trp Thr Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 88:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Tyr Thr Asp Gln Val Pro Phe Ser Val 5

- (2) INFORMATION FOR SEQ ID NO: 89:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown

- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Ile Thr Trp Gln Val Pro Phe Ser Val
1 5

- (2) INFORMATION FOR SEQ ID NO: 90:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Ile Thr Phe Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 91:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

Ile Thr Tyr Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 92:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide



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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Ile Thr Ala Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 93:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) 'TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

- (2) INFORMATION FOR SEQ ID NO: 94:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Ile Thr Ser Gln Val Pro Phe Ser Val
1 5

- (2) INFORMATION FOR SEQ ID NO: 95:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

Ile Leu Trp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 96:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

Ile Leu Phe Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 97:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

Ile Leu Tyr Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 98:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

Ile Leu Ala Gln Val Pro Phe Ser Val



- (2) INFORMATION FOR SEQ ID NO: 99:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

Ile Leu Met Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 100:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

Ile Leu Ser Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 101:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

Trp Leu Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 102:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

Phe Leu Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 103:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

Tyr Leu Asp Gln Val Pro Phe Ser Val

- (2) INFORMATION FOR SEQ ID NO: 104:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

Tyr Leu Glu Pro Gly Pro Val Thr Val

- (2) INFORMATION FOR SEQ ID NO: 105:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown

- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

Tyr Leu Glu Pro Gly Pro Val Thr Leu
1 5

- (2) INFORMATION FOR SEQ ID NO: 106:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

Tyr Leu Glu Pro Gly Pro Val Thr Ile 1 5

- (2) INFORMATION FOR SEQ ID NO: 107:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

Phe Leu Glu Pro Gly Pro Val Thr Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 108:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:
- Trp Leu Glu Pro Gly Pro Val Thr Ala
 1 5
- (2) INFORMATION FOR SEQ ID NO: 109:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

Tyr Leu Tyr Pro Gly Pro Val Thr Ala

- (2) INFORMATION FOR SEQ ID NO: 110:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

Tyr Leu Trp Pro Gly Pro Val Thr Ala

- (2) INFORMATION FOR SEQ ID NO: 111:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

Tyr Leu Phe Pro Gly Pro Val Thr Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 112:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

Tyr Leu Met Pro Gly Pro Val Thr Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 113:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

Tyr Leu Ser Pro Gly Pro Val Thr Ala 1 5

- (2) INFORMATION FOR SEQ ID NO: 114:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

Tyr Leu Ala Pro Gly Pro Val Thr Ala 1 5





- INFORMATION FOR SEQ ID NO: 115: (2)
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

Tyr Leu Met Pro Gly Pro Val Thr Val

- (2) INFORMATION FOR SEQ ID NO: 116:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - TOPOLOGY: Unknown (D)
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

Tyr Leu Ser Pro Gly Pro Val Thr Val

- (2) INFORMATION FOR SEQ ID NO: 117:
 - (i) SEQUENCE CHARACTERISTICS:
 - LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

Tyr Leu Ala Pro Gly Pro Val Thr Val

- (2) INFORMATION FOR SEQ ID NO: 118:
 - (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9
- (B) TYPE: amino acid
- (C) STRANDEDNESS: Unknown
- (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

Tyr Leu Tyr Pro Gly Pro Val Thr Val 1 5

- (2) INFORMATION FOR SEQ ID NO: 119:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

Tyr Leu Phe Pro Gly Pro Val Thr Val

- (2) INFORMATION FOR SEQ ID NO: 120:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

Tyr Leu Trp Pro Gly Pro Val Thr Val

(2) INFORMATION FOR SEQ ID NO: 121:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 661
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
- (ii) MOLECULE TYPE: Protein
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

Met Asp Leu Val Leu Lys Arg Cys Leu Leu His Leu Ala Val Ile Gly Ala Leu Leu Ala Val Gly Ala Thr Lys Val Pro Arg Asn Gln Asp Trp Leu Gly Val Ser Arg Gln Leu Arg Thr Lys Ala Trp Asn Arg Gln Leu Tyr Pro Glu Trp Thr Glu Ala Gln Arg Leu Asp Cys Trp Arg Gly Gly Gln Val Ser Leu Lys Val Ser Asn 65 Asp Gly Pro Thr Leu Ile Gly Ala Asn Ala Ser Phe Ser Ile Ala Leu Asn Phe Pro Gly Ser Gln Lys Val 90 95 Leu Pro Asp Gly Gln Val Ile Trp Val Asn Asn Thr Ile Ile Asn Gly Ser Gln Val Trp Gly Gly Gln Pro 110 Val Tyr Pro Gln Glu Thr Asp Asp Ala Cys Ile Phe 125 Pro Asp Gly Gly Pro Cys Pro Ser Gly Ser Trp Ser 135 140 Gln Lys Arg Ser Phe Val Tyr Val Trp Lys Thr Trp 150 Gly Gln Tyr Trp Gln Val Leu Gly Gly Pro Val Ser 160 165 Gly Leu Ser Ile Gly Thr Gly Arg Ala Met Leu Gly 175 Thr His Thr Met Glu Val Thr Val Tyr His Arg Arg Gly Ser Arg Ser Tyr Val Pro Leu Ala His Ser Ser 200 Ser Ala Phe Thr Ile Thr Asp Gln Val Pro Phe Ser 205 210





Val Ser Val Ser Gln Leu Arg Ala Leu Asp Gly Gly 220 Asn Lys His Phe Leu Arg Asn Gln Pro Leu Thr Phe 230 235 Ala Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala 245 250 Glu Ala Asp Leu Ser Tyr Thr Trp Asp Phe Gly Asp 255 260 Ser Ser Gly Thr Leu Ile Ser Arg Ala Leu Val Val 265 Thr His Thr Tyr Leu Glu Pro Gly Pro Val Thr Ala 275 Gln Val Val Leu Gln Ala Ala Ile Pro Leu Thr Ser 290 Cys Gly Ser Ser Pro Val Pro Gly Thr Thr Asp Gly 300 His Arg Pro Thr Ala Glu Ala Pro Asn Thr Thr Ala 310 315 Gly Gln Val Pro Thr Thr Glu Val Val Gly Thr Thr 325 Pro Gly Gln Ala Pro Thr Ala Glu Pro Ser Gly Thr 335 340 Thr Ser Val Gln Val Pro Thr Thr Glu Val Ile Ser 350 Thr Ala Pro Val Gln Met Pro Thr Ala Glu Ser Thr Gly Met Thr Pro Glu Lys Val Pro Val Ser Glu Val 370 375 Met Gly Thr Thr Leu Ala Glu Met Ser Thr Pro Glu 385 Ala Thr Gly Met Thr Pro Ala Glu Val Ser Ile Val 395 400 Val Leu Ser Gly Thr Thr Ala Ala Gln Val Thr Thr 405 410 Thr Glu Trp Val Glu Thr Thr Ala Arg Glu Leu Pro 420 Ile Pro Glu Pro Glu Gly Pro Asp Ala Ser Ser Ile 435 Met Ser Thr Glu Ser Ile Thr Gly Ser Leu Gly Pro 445 Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu Val Lys 455 460 Arg Gln Val Pro Leu Asp Cys Val Leu Tyr Arg Tyr 470 Gly Ser Phe Ser Val Thr Leu Asp Ile Val Gln Gly 480 Ile Glu Ser Ala Glu Ile Leu Gln Ala Val Pro Ser 495 500 Gly Glu Gly Asp Ala Phe Glu Leu Thr Val Ser Cys 510 Gln Gly Gly Leu Pro Lys Glu Ala Cys Met Glu Ile 520 525 Ser Ser Pro Gly Cys Gln Pro Pro Ala Gln Arg Leu 535





Cys Gln Pro Val Leu Pro Ser Pro Ala Cys Gln Leu 545 Val Leu His Gln Ile Leu Lys Gly Gly Ser Gly Thr 560 Tyr Cys Leu Asn Val Ser Leu Ala Asp Thr Asn Ser 565 570 Leu Ala Val Val Ser Thr Gln Leu Ile Met Pro Gly 580 585 Gln Glu Ala Gly Leu Gly Gln Val Pro Leu Ile Val 595 Gly Ile Leu Leu Val Leu Met Ala Val Val Leu Ala 605 610 Ser Leu Ile Tyr Arg Arg Leu Met Lys Gln Asp 615 620 Phe Ser Val Pro Gln Leu Pro His Ser Ser Ser His 630 Trp Leu Arg Leu Pro Arg Ile Phe Cys Ser Cys Pro 640 645 Ile Gly Glu Asn Ser Pro Leu Leu Ser Gly Gln Gln 650 655 Val

- (2) INFORMATION FOR SEQ ID NO: 122:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

Xaa Xaa Xaa Ile Gly Ile Leu Thr Xaa 1 5

- (2) INFORMATION FOR SEQ ID NO: 123:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:





Xaa Xaa Xaa Gly Gln Tyr Trp Gln Xaa

- (2) INFORMATION FOR SEQ ID NO: 124:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

Xaa Xaa Xaa Gln Val Pro Phe Ser Xaa

- (2) INFORMATION FOR SEQ ID NO: 125:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

Xaa Xaa Xaa Pro Gly Pro Val Thr Xaa 1 5

- (2) INFORMATION FOR SEQ ID NO: 126:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 10
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: Unknown
 - (D) TOPOLOGY: Unknown
 - (ii) MOLECULE TYPE: Peptide
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

Phe Leu Pro Ser Asp Tyr Phe Pro Ser Val 1 5 10